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09/641,535	08/18/2000	Dong-Ho Song	2101785-991100	6807

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EXAMINER

LE, DAVID Q

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,535

Applicant(s)

SONG ET AL.

Examiner

David Q Le

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MLW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-17, 19, 21-23, 25-27, 29-36, 38-47 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-17, 19, 21-23, 25-27, 29-36, 38-47 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>14</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Examiner's Note

1. The Examiner has pointed out particular references contained in the prior art of record in the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claims, other passages and figures apply as well. It is requested from the Applicant, in preparing the response, to consider fully the entire references as well as the context of all passages in the cited references as potentially teaching all or part of the claimed inventions.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 2nd 2004 has been entered.

Status of Claims

3. Per the request for continued examination filed on February 2nd 2004:
Claims 1, 2, 10, 16, 21, 27, 29, 32, 36, 40, 42, 47, 49 have been amended.
Claims 13, 18, 20, 24, 28, 37, 48 have been cancelled.
Claims 1-12, 14-17, 19, 21-23, 25-27, 29-36, 38-47, and 49-51 remain pending.

Response to Request for Reconsideration

4. The request for consideration filed on February 2nd 2004 has been considered but is ineffective to

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overcome Ahmad, US Patent No 5,925,127, and Liu, US Patent No 5,953,005.

Response to Arguments

5. Applicant's arguments have been fully considered but they are not persuasive:

In regards to claims 1, 10, 16, 21, 27, 32, 36, 42, and 47.

Applicant reiterates the argument that there is no "process manager" in Ahmad that (1) creates and runs a process corresponding to the main executable file, (2) suspend the process if the process requests one or more optional files, and (3) re-starts the process if the one or more optional files are received.

Examiner continues to disagree with this interpretation of the reference. Ahmad's SM (software monitor) module is a "process manager": it (1) creates and runs a "process" corresponding to the main executable file, (2) suspends the process if there is the need for one or more optional files (the license authorization files contained in the CICO module), and (3) re-starts the process if the one or more optional files are received (the proper license data are found in the CICO module), therefore allowing the rental software to execute, play, display, etc.

Liu's applet performs all of the functions described above. In addition, Liu allows for additional files to be downloaded, fetched, retrieved, synchronized with other files, and executed accordingly.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention

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was made.

7. Claims 1-7, 10-12, 14-17, 19, 21-23, 25-27, 29-36, 38-44, 47, and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmad, US Patent No 5,925,127, in view of Liu, US Patent No 5,953,005.

As per claim 1:

Ahmad discloses

A system for renting a software program in a distributed computing environment (wherein the rental software program includes a main executable file and optional files called by the main executable file that are executed by the main executable file to implement the rental software program, (Abstract; Summary of the Invention; Figs 1-3, associated text; Col 2, lines 15-25; see Response to Arguments), comprising:

a server computer system for downloading the main executable file contained in the rental software program to be executed in said user computer system and means for automatically downloading the one or more optional files as requested by said user computer system (Ahmad: Figs 1-3; associated text; see Response to Arguments);

[a user computer system comprising] a process manager means further comprising means for creating and running a process corresponding to the main executable file, means for suspending the process if the process requests one or more optional files, and means for re-starting the process if said process manager means receives the one or more optional files from said server computer system (Ahmad: Figs 3-4, related description; Col 3, line 20 – Col 4, line 37; Col 9, line 38 – Col 10, line 49);

Ahmad does not specifically disclose automatically requesting additional optional files.

Liu discloses a system and method for providing access to digital media online which consists of downloading to a client computer a main file followed optionally by additional files (Abstract, Figs 1-4, related descriptions; Col 2, lines 15-36);

wherein the rental software program includes a main executable file and optional files (Liu: Col 2, lines 15-36), [and] comprising:

a user computer system including means for initially downloading the main executable file of the rental software program to begin execution of the rental software program and means, if an optional file is missing, for automatically requesting one or more optional files contained in the rental

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software program in order to continue execution of the rental software program using the optional files (Liu: Abstract, Figs 1-3, Fig 4, related description; Col 2, lines 15-36).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to have combined the multiple files download feature of Liu's invention with Ahmad's system to provide a more flexible and attractive software rental distribution system, allowing users to request, download, and pay for only the specific software modules they actually want to use. Such a system would have met all the limitations of claim 1 (see Response to Arguments).

As per claim 2:

Ahmad in view of Liu discloses all the limitations of claim 1.

Ahmad and Liu further disclose

a storage means for storing the main executable file, ..optional files ..and a list of optional files downloaded from said server computer system (Ahmad: Fig 1, related description);

a monitor means for monitoring the process to determine whether the process requests the one or more optional files, and further comprising means for intercepting a message requesting the one or more optional files from the process (Liu: Figs 4, 9-10, related description; Col 2, lines 56-60; Cols 5 – 8), *and means for automatically requesting the one or more optional files to said server computer system* (Liu: Figs 4, 9-10, related description; Col 2, lines 56-60; Cols 5 – 8).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to combine the cited features of Ahmad's and Liu's inventions to provide a flexible, interactive, and attractive system for renting software to users via online communications channels.

As per claims 10 and 21:

Liu discloses

A method [and computer-readable media] for renting a rental software program ...comprising: performing a communication connection between a user computer system and a server computer system based on a user-transparent install-free technology (Figs 1-2, related description; Col 2, lines 15-33; note Col 2, lines 36- 39: "the user is completely unaware of the automatic delivery of an applet including data and instructions from a main database server");

displaying a list of rental software programs downloaded from the server computer system (Fig 2; Col 2, lines 39-40);

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selecting the rental software program in the list of rental software programs (Fig 2; Col 2, lines 39-40);

downloading a main executable file associated with the rental software program from the server computer system to run a process corresponding to the main executable file and begin execution of the rental software program (Fig 4, related description);

if the process needs one or more optional files, downloading the one or more optional files from the server computer system...files (Fig 4, related description).

Liu also discloses that files downloaded with a main program to the user's computer system have the capability to control the execution of said program, including fetching additional files as needed, inserting them into the execution of the main program, synchronizing them, streaming the data as needed (Fig. 4, Box 88, related description). It would have been obvious to one ordinarily skilled in the art at the time the invention was made that to make this possible would require the use of interrupt calls to the customer's system, and to have set up the system with the same limitations as cited by claims 13 and 24:

.. downloading the optional files further comprising: monitoring the process in the file monitor in order to determine whether the process needs the one or more optional files;

if the process needs the one or more optional files, hooking a message requesting the one or more optional files from process;

suspending the process until the user computer system downloads the one or more optional files from the server computer system; and if the user computer system downloads the one or more optional files from the server computer system, re-running the process.

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to have combined *Liu's* multiple file download feature with *Ahmad's* software rental method to provide a dynamic software delivery system, wherein various modules of a software package may be delivered seamlessly and transparently to a client user, as each module is required. Such a system would also minimize storage demands on a user's computer system, as only the necessary software pieces would be downloaded from the server system.

As per **claim 16**:

Ahmad discloses that his system will comprise a downloaded file called "software monitor" (SM) that controls and monitors the use of the main application program downloaded to the user's computer. The actual authorization to access the application program is further contained in another downloaded file, called a "check-in check-out module" (CICO). Once the rented application program has been used

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and the authorization for its use has expired, the SM module will delete the CICO, thus rendering the rented program inaccessible to the user (Figs 3-4, 5A-5B; Block 670 in Fig 5B; related description; Col 14, lines 7-14). Ahmad teaches that deleting key files downloaded onto a user's computer is a good method for preventing unauthorized access and/or use of the rental software.

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to implement a variation of Ahmad's method to a system of software rental/servicing that will comprise deleting the actual application program downloaded after it's been used. Such a variation would provide even stronger security because it would not leave any program code for a fraudulent user to attempt to hack into or copy. Such a system, combined with other features from Liu's invention, would meet all the limitations of claim 16, namely:

A method for servicing an install-free application in an online software rental system, comprising:

getting a list of applications available for a rental service from a server computer system (Liu: Fig 2);

establishing a rental session between a client computer system and the server computer system (Ahmad: Figs 1-2; Liu: Fig 1);

fetching one or more application software from a plurality of application software stored in the server computer system (Ahmad: Figs 1-2; Liu: Figs 1-2) ;

executing the one or more application software in the client computer system using a main executable file and one or more optional files, wherein the one or more application software include ... using the optional files ; and if said prior step is complete, flushing the one or more application software rented from the server computer system (Ahmad: Figs 5A-B; Liu: Figs 3-5).

As per claims 27 and 36:

Both Ahmad and Liu disclose that the user's computer will serve as a means to select the software to be downloaded thus causing the software to be pulled from the server computer system. As such, Ahmad in view of Liu meet the limitations of claims 27 and 36:

A system for renting a rental software program in a distributed computing environment, wherein [27] the rental software program includes a main executable file and one or more optional files called by the main executable file that are executed by the main executable file to implement the rental software program,

[36] the system includes at least one client computer system and a server computer system

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and the rental software program includes a main executable file and one or more optional files, comprising a first means for pulling the main executable file out of a server computer system to begin ...program; and a second means for pulling the one or more optional files out of the server computer system ..from the process.

As per **claim 32**:

Liu discloses that his system may, without prompting from the user, download files to the user's computer system while the session is ongoing (Liu: Col 2, lines 34-52), thus pushing files to the user's system. It would have been obvious to one ordinarily skilled in the art at the time the invention was made to have set up a system comprising such push technology, combined with Ahmad's process manager feature, for the purpose of delivering additional content/information to a user's system while the user is involved in browsing or executing previously downloaded software. Such a system would meet the limitations of claim 32.

As per **claim 42**:

Both Ahmad and Liu disclose servers that store software intended for view and download by users (Ahmad: Fig 1; Liu: Fig 1; related description). Both inventions also relate to fee-based application or multimedia software rental (Ahmad: Abstract, Col 8, line 58 – Col 9, line 15; Liu: Col 5, lines 13-17). Accordingly, and in view of the features already cited in the previous claims, Ahmad in view of Liu meet all the limitations of claim 42.

As per **claim 47**:

Ahmad in view of Liu meet all the limitations of this claim as applied to the client portion of the system, based on the same citations used in claim 42 as well as previous claims above.

As per **claims 3 and 43**:

Ahmad in view of Liu discloses all the limitations of claims 2 and 42.

Ahmad further discloses that optional files sent with the downloaded main program may include control files that may be implemented as DLL (dynamic-link library) or OCX (Active X/OLE) files (Ahmad: Col 10, lines 39-49). Ahmad teaches that "*the mechanism for downloading and launching [files] from the Internet is well known to those skilled in the art*". While neither Ahmad nor Liu specifically mentions files stored in the registry of a user's system, it would have been obvious to

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one ordinarily skilled in the art that in order for files to be called and executed or used within a process, a list of those files would have had to be downloaded from the server and stored in the user system's registry. As such, *Ahmad* in view of *Liu* meets all the limitations of claims 3 and 43.

As per claims 4, 29, 38 and 49:

Ahmad further discloses

[a] system ... wherein said user computer system further includes:
protection means for protecting the rental software program rented from said server computer system to prevent an unauthorized use committed by said user computer system (Ahmad: Fig 3 – 5B, related description); and
a billing database for storing billing information (Ahmad: Figs 5A-5B, related description).

Neither *Ahmad* nor *Liu* specifically disclose
a converting means for converting registry file information contained in the list of optional files into registry file information appropriate to said user computer system;

However it would have been obvious to one ordinarily skilled in the art at the time the invention was made that both *Ahmad's* and *Liu's* inventions were targeted at user computer systems comprising many different operating systems (i.e. Windows/Intel, Apple MacIntosh, Unix/Linux, etc.). Since the communications network utilized by all those systems include the World Wide Web and Internet, and also in view of the fact that *Liu's* system utilized Java applets (a universally usable technology) to deliver software, it would have been inherent that the capability to convert such downloaded files for use on different user computers would have been necessary. As a result, any system built using a combination of *Ahmad's* and *Liu's* inventions would have had to incorporate this limitation.

As per claims 5, 30, 39 and 50:

Ahmad further discloses

[a] system ... wherein the billing information includes a billing start time, a billing end time and ..
the rental software program selected by said user computer system (Ahmad: Figs 5A-5B, related description; Col 11, lines 27-42).

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As per claims 6, 31 and 40:

As per claims 16 and 21 above, Ahmad teaches a method of deleting critical authorization files in order to deny access and use of the downloaded software. It would have been obvious for one ordinarily skilled in the art at the time the invention was made to implement a variation of Ahmad's method to a system of software rental/servicing that will comprise deleting the actual application program downloaded after it's been used. Such a variation would provide even stronger security because it would not leave any program code for a fraudulent user to attempt to hack into or copy. Such a system, combined with other features from Liu's invention, would meet all the limitations of claims 6,31 and 40:

A system... wherein said process manager means further comprising means for flushing the main executable file and the one or more optional files stored in said storage means when the process is complete based on the registry file information.

As per claims 7, 35, 41 and 44:

Ahmad and Liu disclose that their system's servers include:

a verification means for verifying said user computer system by using identification information of said user computer system stored in a user-information database (Ahmad, Figs 1-2, Liu: Figs 1, 4-5; related description);

a program database for storing path information of the main executable file, a list of rental software programs and a list of the optional files (Ahmad, Figs 1-2, Liu: Figs 1, 4-5; related description);

an analyzing means for analyzing a new rental software program when the new rental software program is installed in said server computer system, wherein said analyzing means further comprises means for storing the path information of the main executable file and a list of the optional files, associated with the new rental software program, in said program database (Ahmad: Fig 3, Col 9, lines 16-37; Liu: Figs 1-4, related description);

a storage means for storing the main executable file and the one or more optional files; and

a means for obtaining and sending the main executable file stored in said storage means when said user computer system selects the desirable rental software program (Ahmad, Figs 1-3, Liu: Figs 1, 4-5; related description); and

means for obtaining and sending the one or more optional files stored in said storage means when said user computer system optionally requests the one or more optional files to said server computer system (Ahmad, Figs 1-2, Liu: Figs 1, 4-5; related description).

As per claims 11 and 22:

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Both *Ahmad* and *Liu* disclose authentication of users prior to delivery of software and services:

The method [and computer-readable media] ... wherein establishing the communications further comprises: performing the communication connection between the user computer system and the server computer system; and verifying the user computer system in the server computer system (Ahmad: Figs 3-5B, related description; Liu: Figs 4-5, related description).

As per **claims 12 and 23**:

The limitations of these claims are all met by *Ahmad* in view of *Liu*:

The method [and computer-readable media]... wherein downloading the file further comprises: downloading the main executable file and a list of optional files from the server computer system, wherein the optional files include a registry file (as per claims 3 and 43);

converting registry file information contained in the list of optional files into registry file information appropriate to the user computer system (as per claims 4, 29, 38 and 49) and;

running a file monitor and a protector, which protects the rental software program including the main executable file and the one or more optional files from an unauthorized use committed by the user computer system (see all above citations);

storing a name of the rental software program selected by the user computer system and a billing start time in a billing information database of the user computer system; informing the server computer system of the billing start time (as per claims 5, 30, 39 and 50); and

creating and running the process corresponding to the main executable file (Ahmad, Figs 5A-B; Liu, Figs 3-5, 7-10, related description).

As per **claims 14 and 25**:

Liu discloses

[A] method [and computer readable media] ...wherein the process completion step further comprises:

determining whether the process has been complete;

if the process has been complete, performing a procedure accompanying a process completion;

determining whether the user computer system wants to select another rental software program;

if the user computer system wants to select the another rental software program, repeating the steps to download the optional files; and

if the user computer system does not want to select the another rental software program,

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terminates the communication connection between the user computer system and the server computer system (Figs 4-5, 7-10, related descriptions).

As per **claims 15, 26 and 51:**

Ahmad discloses

[A] method [and computer-readable media]...wherein the process completion step further comprises:

if the process has been complete, terminating the file monitor and the protector;

storing a billing end time in the billing information database of the user computer system;

informing the server computer system of the billing end time; and

flushing the main executable file and the one or more optional files stored in the storage device of the user computer system (Figs 5a-5B, related description; see rejection of claim 16 above).

As per **claims 17 and 19:**

Ahmad and Liu both disclose the limitations cited in these claims:

The method as recited in claim 16, wherein the list of applications is established on Internet (Ahmad: Col 4, lines 38-40; Liu: Abstract).

The method as recited in claim 16, wherein the one or more application software is authorized by the server computer system (see claims 11 and 22 above).

As per **claims 33 and 34:**

Liu discloses that content may be automatically pushed to the customer's computer system once connection is established (Col 6, lines 18-27). As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made that this capability would lend itself perfectly to advertising, promotion, or delivery of free software to customers' systems. A system built using these teachings would have met with all the limitations of claims 33 and 34:

[A] system ... wherein said first and second means are intended for advertisement.

[A] system ... wherein said first and second means are intended for freeware.

8. **Claims 8-9 and 45-46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ahmad** in

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view of Liu and further in view of Crawford, US Patent No 6,327,579.

As per claims 8 and 45:

Ahmad and *Liu* are silent on the subject of logs being kept for billing purposes at the host site of their inventions. It would have been obvious to one ordinarily skilled in the art at the time the invention was made that such logs would have to be inherent in both *Ahmad's* and *Liu's* systems. However *Crawford* is explicit in such logs being kept and will be used as further prior art in the following claims:

[A] system as recited..., wherein said server computer system further includes:

a billing means for processing charge or fee to be paid for the usage of the main executable file and the one or more optional files associated with the rental software program provided to said user computer system (Crawford: Figs 18, 21A, 21C, 21D, 21E, 21F, related description);

a log database for storing a log file necessary for recovering said server computer system when said server computer system is not operable due to a serious error (Crawford: Abstract; Col 8, lines 28-38: Crawford discloses that client's data/application software may be backed up and restored in case of catastrophic failure. It would have been obvious to one ordinarily skilled in the art at the time the invention was made that such backup and restore procedures would have been implemented for the host data, operating systems, rental application programs and optional files as well);

a recovery means for recovering said server computer system by using the log file stored in said log database when said server computer system is not operable due to the serious error (same as above);

a schedule management means for managing a schedule of computer system and another user requests from said user computer system (all three cited inventors target their inventions at multiple users, who will simultaneously log in to host servers and make requests for application software, optional files, and other services. It would have been obvious to one ordinarily skilled in the art at the time the invention was made that a schedule management means would have been inherently incorporated at the host site, in order to efficiently manage the delivery of such software and services in real time); and

a session management means for managing a communication session between said user computer system and said server computer system (same as above).

As per claims 9 and 46:

The limitations cited in these two claims were addressed above for claims 3 and 43 and the claims are rejected on the same basis:

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[A] system ..wherein said server computer system sends the list of optional files to said user computer system when said server computer system sends the main executable file to said user computer system and wherein the optional files includes a registry file.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Le whose telephone number is 703-305-4567. The examiner can normally be reached on 8:30am-5:30pm Mo-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P Trammell can be reached on 703-305-9768. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DQL



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600